

REMARKS

This communication is responsive to the Office action dated March 12, 2004. It is being filed within the initial three-month period for response. In the Office action, the Examiner allowed claims 7-13. Claims 1 and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,182,996 to Spence (“Spence”). Claims 2-4 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim. Finally, claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Spence in view of U.S. Patent No. 4,647,879 to Vaddiparty (“Vaddiparty”).

After entry of the above amendments, claims 1-20 are pending in the application. In the above amendments, claims 1-3 are amended. Claims 14-20 are added. In view of the above amendments and below remarks, applicants respectfully request reconsideration of the application under 37 C.F.R. § 1.111 and allowance of the pending claims.

Rejections under 35 USC § 102

In the Office action, claims 1 and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by Spence. Applicants respectfully traverse the rejection.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Not only must the prior art reference describe each and every element, but “the elements must be arranged as required by the claim.” *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Claim 1 now recites an N-way RF divider having a body extending along a

longitudinal axis and having first and second ends, a first transmission line extending between the first and second ends of the body, N second transmission lines electrically isolated from the first transmission line and extending between the first and second ends of the body, and an electrical connection between a first end of the first transmission line and a first end of each of the second transmission lines.

By contrast, Spence does not show or suggest electrical isolation within its “housing” between any transmission lines. Spence explicitly discloses “a housing,” which “can be any uniform hollow shape.” (col. 5, ll. 4-5). Also, transmission lines may “be disposed in any arrangement” within the housing “so long as the appropriate ends of inner conductors are available at the two openings of the housing.” (col. 7, ln. 67 to col. 8, ln. 2) Thus, the housing of Spence through which all of the transmission lines extend is hollow, and Spence does not disclose or suggest isolating any of the transmission lines relative to any other of the transmission lines. This is reinforced by the description at column 4, starting at line 67, where the housing is described as specifically creating an electrical shield, but only between the combination of inner transmission lines (within the housing) and the outside electrical environment. The abstract states that “the power splitter utilizes n number $\lambda/4$ inner conductors disposed in a $\lambda/4$ housing, which provides a common electromagnetic shield.” Further, as stated in column 4, line 67 to column 5, line 3 with reference to FIG. 1, “Housing 16 must provide a shield against electromagnetic energy between inner conductors 12 and 14 and the outside electrical environment. Housing 16 cannot produce an electromagnetic shield between inner conductor 12 and inner conductor 14.” Thus, the only conclusion is that all transmission lines in the common housing are not effectively electrically isolated.

Thus, the applicants submit that claim 1 is not anticipated by Spence, and is in condition for allowance. Claim 6 is dependent from and contains all the limitations of claim 1, and thus is also in condition for allowance.

Rejections under 35 USC § 103

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Spence in view of Vaddiparty. The applicants respectfully traverse the rejection.

“It is insufficient to establish obviousness that the separate elements of the invention existed in the prior art, absent some teaching or suggestion, in the prior art to combine the elements.” *Arkie Lures, Inc. v. Gene Larew Tackle*, 119 F.3d 953, 957 (Fed. Cir. 1997). Therefore, some motivation to combine is required to make a *prima facie* case of obviousness.

As a preliminary note, claim 5, a claim dependent from and having all the limitations of claim 1, is distinguishable from the cited art for the same reasons that claim 1 is distinguishable, as discussed above. The applicants nonetheless further submit that Vaddiparty does not provide the requisite motivation to combine the use of a plurality of resistive paths as required by claim 5.

Claim 1 recites an electrical connection between a first end of the first transmission line and a first end of each of the second transmission lines. Claim 5 recites an N-way RF divider of claim 1 including a plate mounted on the second end of the body, and a plurality of resistive paths mounted on the plate, the resistive paths interconnecting each pair of second ends of the second transmission lines.

Spence discloses a power divider/combiner that uses intermediate active devices, and recombines all of the divided signals. Vaddiparty provides both recombining and separate

output of the divided signal lines, a structure that does not exist in the device of Spence. There is, therefore, no need for isolation resistors in the configuration disclosed by Spence, leading one skilled in the art not to use resistors in the device of Spence.

Even if one assumes that such resistors would be useful in the device of Spence, Vaddiparty discloses the location of isolation resistors on a substrate adjacent to the point of division of the input conductor into multiple conductors. "An isolation resistor 33 is connected between each pair of radial outputs 31 at the radially outward ends of corresponding stubs 32. . . . The function of resistors 33 is to tie down the phase at each of the radial outputs 31." (Column 3, lines 4-13.) This configuration would lead one skilled in the art to put the isolation resistors on the first end of Spence's divider/combiner where the signals are being split, rather than at the opposite end of the housing. Thus, the applicants submit that claim 5 is not obvious over Spence in light of Vaddiparty, and is therefore in condition for allowance.

Objections To Claims 2-4

By amendment of claims 2 and 3, claims 2-4 now include the limitations of original claim 1, and are also in condition for allowance.

New Claims 14-20

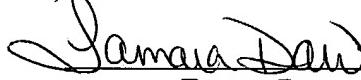
New claims 14-20 add a new independent claim and several independent claims that are directed to features also not shown in the cited references, and are therefore also considered to be in condition for allowance.

The applicants believe that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, the applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner

has any questions, or if a telephone interview would in any way advance prosecution of the application, the undersigned attorney of record may be contacted at the telephone number noted below.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, to: Mail Stop AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on June 10, 2004.



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